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REPORTS OF THE UNITED STATES COMMISSIONERS.

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REPORT  
ON  
SCHOOL-HOUSES,

AND THE  
MEANS OF PROMOTING POPULAR EDUCATION,

BY  
J. R. FREESE,  
UNITED STATES COMMISSIONER.



WASHINGTON:  
GOVERNMENT PRINTING OFFICE.  
1868.

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# REPORT ON SCHOOL-HOUSES

AND

THE MEANS OF PROMOTING AND EXTENDING POPULAR EDUCATION.

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In this report the notices and inquiries are confined to the exhibits made in the Exposition by different nations. To go outside of this would involve an inquiry of interminable length, which could only be embodied in volumes rather than in a portion of a single report of reasonable limits. What, then, is there in the Exposition relative to school-houses and the means of promoting and extending popular education?

## SCHOOL-ROOMS AND BUILDINGS.

Of rooms or buildings specially designed for educational purposes there are only four in the Exposition, contributed by Sweden, Prussia, Saxony, and the United States.

### SWEDISH SCHOOL-ROOM.

The contribution from Sweden is a school-room on the first floor of a building representing one class of the habitations of the country. The room is about 24 feet in length by 18 in width; height of ceiling about 10 feet; lined with boards on the sides; bare beams overhead, and with but one low double window at one end. Everything about the room is rough and uncouth. The building is not intended to represent the residence of the teacher in connection with, or having charge of, the school, but is only exhibited as a specimen of the habitations of the country. Whether the common schools of the country are ordinarily located in one room of a private residence, as this represents, I am not informed, but presume from the exhibit that such is the case.

### PRUSSIAN SCHOOL BUILDING.

The Prussian school building represents such as are usual in the villages of the country. It consists of two parts blended in one building. Its form is that of a T, with this difference, however, that the leg or part which runs off from the cross is, in length and breadth upon the ground, about the same as the upper or cross building; the lower floor of the latter being used as the school-room, and the second floor of this, with all of the balance, as a residence for the teacher. The school-room is about 30 feet in length by 20 in width; height of ceiling about 10 feet; plastered within and well lighted. The ground floor of the dwelling part consists of an entry-way, (used for access to the school-room as well as for the dwelling part;) a sitting room about 15 feet square; a cabinet

or library room at the end of the sitting room; a bed chamber behind the cabinet, and a kitchen behind the sitting room. On the second floor are four other bed chambers, two over the school part and two over the dwelling part.

#### SAXON SCHOOL-HOUSE.

The third specimen school-building is from Saxony, and represents the normal rather than the common school establishments. It is in the form of a small Grecian temple, with four columns in front, and with niches, in which are vases, on either side of the main entrance. Its length and width, each, is about 28 feet; ceiling about 12 feet, and it is lighted from above.

#### UNITED STATES SCHOOL-HOUSE.

The fourth, and only other, school-building is the specimen contributed from the State of Illinois, of the United States, and is intended to represent the common cross-road and village school-house as connected with the common-school system of the State. It is a substantial frame building; weather-boarded and painted without; plastered neatly within; is 33 feet in length by 17 in breadth; has three high windows, which lower from the top, on either side, and two at one end; its ceiling is 15 feet in height, with a vestibule outside of the school-room, to which doors give entrance from either side, and from which two doors open into the school-room.

#### COMPARISON OF SCHOOL BUILDINGS.

In considering the question (with these, and only these, specimens before me) as to what, if anything, can be learned from other nations in the way of constructing buildings, or rooms, for educational purposes, I am forced to the conclusion that we can learn nothing to advantage, but, on the contrary, that other nations, if they choose, may learn from us.

The superior height of ceiling, with windows letting down from the top, of our school-room, affords full and free ventilation so necessary for the health and comfort of the pupils, while the large windows upon either side and at the end afford an abundance of light, and thereby saves the straining of vision, which is unavoidable where children are taught in rooms dimly lighted. The general appearance and neatness of the room, too, is far superior to either of the other exhibits, and it may be said that, if you wish to teach children habits of neatness and good order, you must have the room in which they are taught, and everything about it, neat and in good order.

The neatness of ours, as compared with the uncouth appearance of the other common school exhibits, illustrates another fact greatly in favor of the United States, namely; the superior social status which teachers of common schools hold in our country, as compared to that

held by them in most European countries. With us the teacher of even the cross-road or village school is held in high esteem, and is everywhere treated with respect due to his talents and personal worth, as well as to his vocation as an educator. In most European countries teachers of common schools hold a very subordinate position in the community in which they reside, not equal to that of the tradesman and mechanic, and their vocation is regarded as one of humility rather than of honor. "Once a schoolmaster always a schoolmaster," is the maxim with them, whereas, in the United States, the school teacher of to-day may be the minister, the lawyer, the doctor, or the congressman of five years hence, or, if a female, the wife of either, and the vocation itself, so long as pursued, is always regarded as one of honor and responsibility.

As to the Prussian plan of having a dwelling for the teacher connected with the school-room, it would hardly be generally practicable in the United States, as much the larger portion of teachers in our common schools are unmarried, and hence need no such family home. The idea, however, is not without its practical bearings, and where a teacher has a family it would certainly be a great convenience to him to have a dwelling connected with his school-room, as rectories or parsonages are connected with church edifices.

The plan of thus connecting the two is, I am told, very common in Prussia, and throughout most of the German states, and is found to be advantageous, in that it gives a fixed home to the teacher; relieves him from the payment of rent, and the acre or two of ground usually connected with such school edifices affords him pleasant and profitable employment when out of school. In sparsely settled neighborhoods of the United States it might be well to consider, when about to erect a school house, whether a dwelling part connected with it would not be expedient; for, even if the teacher has no family himself, he might, by having the control and rental of the dwelling, as part of his compensation, get a family to occupy it with whom he could board pleasantly; and if he should have a family of his own, the convenience, in such a neighborhood, would certainly be very great.

### SCHOOL HOUSE FURNITURE.

The desks and benches in only three of the rooms can be described and compared, as the school-house from Saxony is not thus furnished.

In the Swedish school-room the desks and seats of the pupils are separate. The lids of the desks incline slightly inward or downward, while in the narrow level space at the top of each desk an excavation is made for pens and another for the inkstand; besides which, each desk is furnished with two brass supports, which, when lifted up, afford a place against which a copy or book may rest. The seats are made of plain boards, with board backs, in the form of a chair, but are rather rough in construction, and, we should think, very uncomfortable to sit upon.



The teacher's desk is supplied with drawers and other appliances, well arranged and in every way convenient.

The desks of the Prussian school-house consist of one long, flat board, about 12 inches wide, with no division or mark to indicate the space assigned to each pupil, and without any particular place for pens, ink, etc. Those exhibited are about 15 feet long, leaving about  $2\frac{1}{2}$  feet on either side between the end of the desks and the walls. The seats are like the desks, one long, flat board, only that they are 9 inches instead of 12 in width. They have no backs, or division marks to designate the place of each pupil. The teacher's desk is only a plain stand, without conveniences of any kind.

In the American school-house the desk and seat of each pupil is distinct and separate, and both are fitted up with a special view to comfort as well as convenience. Not only are they comfortable and convenient, but neat withal, and the most thoughtless or mischevious pupil would never think of using his penknife to deface either. Here, as in the case of the school-room, the remark will apply that neatness in the furnishing induces or begets habits of neatness in the pupils. The teacher's desk is fitted up with drawers and every convenience.

Of the three exhibits of school-room furniture the American is altogether the best, both as to convenience, comfort, and neatness, so that here, as in the case of the school-rooms, we can profit nothing from the exhibits of other nations.

### APPARATUS FOR PROMOTING EDUCATION.

In considering school apparatus, and such other appliances as have been invented and used for promoting education, the exhibits made by two other nations, viz. : France and Spain, should be added to the list.

Commencing again with Sweden, a large variety of school apparatus of almost every shape and form, is to be found on exhibition, some of which is exceedingly ingenious and curious, and could scarcely fail to interest, while instructing the younger pupils. Colored counters, strung on horizontal wires, in an upright frame ; small black-boards, with movable slides, on which letters and figures are arranged in different orders ; another board, with movable metal type, which are placed and replaced in grooves and mortises, until the pupil has imitated the copy before him ; blocks, demonstrating the various geometrical figures ; maps and drawings in great variety, some of which are of superior execution ; a large assortment of school books, primary, intermediate and classical ; dried and pressed specimens of the flowers and plants of the country ; and a small collection of minerals, form a general catalogue of this exhibit. We also find here models of gymnastic apparatus, such as are used in some of the schools of the country.

Passing to Prussia, about the same variety of school apparatus and appliances is to be found as in Sweden, together with a few additions worthy of note—such as astronomical maps and atlases of superior workmanship ;

drawings of steam engines and of other mechanical inventions; a large variety of drawing books, embracing almost every conceivable subject; music books in great variety; and specimens of worsted-work and embroidery, done by the female pupils of their common schools. The additional exhibits indicate, in a manner, the special bent or inclination of the popular mind, and the Prussians are found to excel in the very pursuits and accomplishments which are taught thus early to their children.

In the Saxony exhibit is found most of the school apparatus and appliances before mentioned, together with anatomical atlases; a variety of artificial globes, admirably executed; maps, with a black background, showing the starry firmament, and others in *basso-relievo*; and a complete set of blocks, illustrating the systems of crystallization.

### PHYSICAL DEVELOPMENT—GYMNASIUMS.

The great feature of this exhibit is the beautiful model of the Normal Gymnastic School at Dresden, representing not only the buildings and grounds, but each and every contrivance used in the exercises. This model stands upon a large table or platform in the centre of the room, occupying the entire space, except so much as is necessary to pass around it. The prominence given to this exhibit shows how large a share of attention the subject occupies in the minds of the educational men of the country, and may well awaken the inquiry in other countries whether more attention to this branch of physical education would not be beneficial? In Saxony, there is scarcely a common school to be found anywhere without a gymnastic department, and the educational men of the state consider it quite as important to develop the physical as the mental capacity of the pupils. The same is true of other German states, though not, perhaps, to so large an extent as in Saxony.

That such exercises promote the general health as well as the development of muscle and nerve; and that mental development cannot progress favorably and rapidly without sound health and a proportional development of the physical system, will be admitted by all; and, this admitted, it follows that a portion of the time devoted to education cannot be better employed than in systematic gymnastic exercises.

A few schools in the United States, of the higher grades only, have added gymnastics to their other exercises; but it has not been made in any of the States a part of the common school system; and the query now arises whether it might not be added with very great advantage? This report is not the proper place in which to argue the question at length; its province is to state facts and throw out suggestions for the consideration of American educators.

### SCHOOL APPARATUS IN THE SPANISH SECTION.

In the Spanish department of public instruction there is a larger variety of school apparatus and appliances for the promotion of education than in either of the departments heretofore mentioned. I had sup-



posed that Spain was so far behind all the rest of the civilized world in matters of education as to make no pretension to compete with other European nations in this particular; but the exhibit which she makes in the Exposition proves that in this I was mistaken.

In addition to the ordinary school apparatus and appliances found in the other exhibits there are several pieces of peculiar construction, showing not only great ingenuity, but a depth of thought and a wonderful and admirable precision of mathematical calculation. Among apparatus of this kind several movable calculating tables may be mentioned, which, by a simple adjustment, will give correct answers to mathematical problems which it would take hours to solve by the usual methods. It is a "*plano geometrico*," as it is called in Spanish, consisting of a board, about 12 inches square, in which holes are made with such mathematical precision, that, by placing wires with bent points and in lengths to suit the different distances of the holes from each other, any theorem of geometry can be accurately demonstrated. There is also a very complete series of models, showing the systems of crystallization, arranged in 18 distinct groups; and another apparatus, called a "mechanical tablet for teaching to read," wherein the letters or representative signs of simple sounds and articulations are separated in different groups. These letters and groups are printed on ribbon rollers, placed within a case, the face of which has small openings through which these letters and groups may be seen isolated or in combinations as the teacher may determine by the adjusting of little pins, and the turning of a crank at the end of the upright case. The apparatus is simple, though ingenious, and the advantage claimed for it is that it shows each letter *isolated*, and prevents thereby learning by rote, the pupil being necessarily led to distinguish the letters by their own distinctive forms and not by their relative order, as he too frequently does in primers, reading-frames, and reading books, in which letters remain always in the same relative positions in which they are printed. Moreover, as the pupil does not know which letter or combination of letters will appear at the opening his natural curiosity keeps him constantly attentive. There is, also, in the Spanish department a great variety of school books; a large number of drawings, some of which are admirably executed; and some handsome specimens of worsted-work and embroidery done by pupils of their schools.

#### SCHOOL APPARATUS IN FRANCE AND IN THE UNITED STATES.

The French exhibit of school apparatus, books, etc., is quite extensive, embracing almost everything usually found in schools, though there is nothing to be seen in the whole collection, which is specially new or advantageous. Indeed, in variety of apparatus and new school inventions, Spain excels France, a condition of things which no one could have expected from the general reputation of the two countries. Statistics show, however, that the number who can neither read nor write in France is very

great; and not until recently has the government given any special attention to the common schools of the country, though meanwhile giving much attention to the higher branches of education.

The exhibit of school apparatus and appliances by the United States comes next in order but neither in quantity nor variety does it equal the exhibits made by either of the other nations referred to. This is accounted for, however, in part, by the fact that our exhibit is intended to illustrate only such apparatus and appliances as are used in the cross-road and village school, such as the school-house itself represents, whereas the exhibits made by other nations include such as they use in their academies and higher grade of schools as well. What we do exhibit of maps, charts, artificial globes, geometric blocks, etc., etc., are quite equal in quality to the exhibits of other nations, and that we might have shown a much larger variety had we included such as are used in our higher grade of schools is well known to all who have any knowledge of the schools of our country. It is true, however, that the European exhibits show some articles of apparatus and appliances which have never yet been introduced into our schools.

### BENEFICIAL RESULTS OF THE EXHIBITION.

Having thus taken a general survey of the exhibits in the Exposition relative to educational matters the query arises: What can we learn and wherein can we be benefited from the exhibits made?

In the structure of our school-houses and school-rooms, and in the comfort, convenience, and neatness of our school-desks and seats, we cannot, as has been heretofore intimated, learn anything by way of improvement, as ours are much superior to any others in the Exposition. Gymnastic exercises have already been spoken of at sufficient length, and conclusions may be drawn by the educational men of the country. Of apparatus and appliances, as explicit a description has been given as is possible without drawings, and from the hints thrown out the mechanical ingenuity of our educators can easily supply both drawings and improved apparatus if they think it expedient to do so.

One of the marked differences between a primary education in the United States and Europe is the greater attention which the educators of the latter pay to drawing, music, and mechanics. These branches are taught in most of our higher grade of schools, but have not been generally introduced into our primary or common schools. In Germany, and in some other portions of Europe, you will hardly find a boy or girl of ten years of age who has not considerable knowledge of music, and who cannot sing, or play upon some instrument, or both, with considerable skill; and the same may be said of the sketching or drawing of natural objects and mechanical inventions. That these accomplishments afford the possessors much real enjoyment, and tend to develop any latent talent they may possess of an artistic or mechanical kind, is undoubtedly true; and as a consequence of this early training Europeans excel in these very

branches. In these particulars we can learn an improving lesson from the Exposition.

Again, in the exhibits of other nations collections of minerals, and of dried and pressed flowers and plants, peculiar to the country, are to be seen, and which, in a small way, are usual in their primary schools, as well as in those of a higher grade. In the United States geological, mineralogical and botanical collections are always to be found in our colleges, and often in academies or schools of a high grade; but seldom, if ever, in our primary schools. Such specimens are not only interesting as curiosities, but in case any of the pupils should be studying mineralogy, geology, or botany, they would be of great advantage by way of illustration.

It would be a very easy matter for any school in our country to collect in the course of a few years, quite a cabinet of minerals and a large variety of pressed flowers and plants, peculiar to the locality in which the school may be located. Let the teacher say to the pupils, "Bring me every curious stone, or flower, or plant that you may find, and I will arrange and classify them in a way that will give you pleasure and profit," and he would soon have a collection of which he might well be proud. To these, additions could be made from time to time (better specimens taking the place of discarded ones) until the collection would indeed be one of scientific value, as well as of advantage to the pupils, and an ornament to the school-room. Herein, too, a lesson may be advantageously learned from the exhibits of other nations, and it would be gratifying to hear of the general adoption of this plan of collecting minerals and plants by the schools of the United States.

No just comparison can really be made between our own school system and that of European nations, for the reason that the political institutions and the people of our own and of European nations are so entirely dissimilar. What is acceptable to them, and probably beneficial, would not be at all acceptable or profitable to the people of the United States, and *vice versa*. Take, for instance, the laws of Prussia, the nation which is generally acknowledged to be in advance of all other European nations in educational matters, which direct that parents and guardians *shall* keep their children at school *all the while* from the age of 7 to 14, and affixes severe penalties for any neglect so to do. This places the entire direction and control of the public schools in the hands of the central government. Now, in Prussia, where a man will scarcely step across the road to visit his neighbor without a law authorizing or directing him to do so, and where all power is centered in the king and his advisers, such laws are practical and, probably, beneficial; but in the United States, where men will do from their own free choice what they could scarcely be made to do by compulsory laws; where only the largest liberty of action—so long as it interferes not with the action or rights of others—is deemed compatible with republican institutions; and where not only each State, but each county, township, city, and town, claims the



privilege of regulating its own school affairs in many important particulars, such laws could not be enacted, or, if enacted, would be wholly inoperative, as no man could be found who would complain of, and enforce the law against, his neighbor.

Without attempting any extended comparison of the school system of the United States and those of European nations, this brief report upon school-houses and the means of promoting and extending popular education is respectfully submitted.

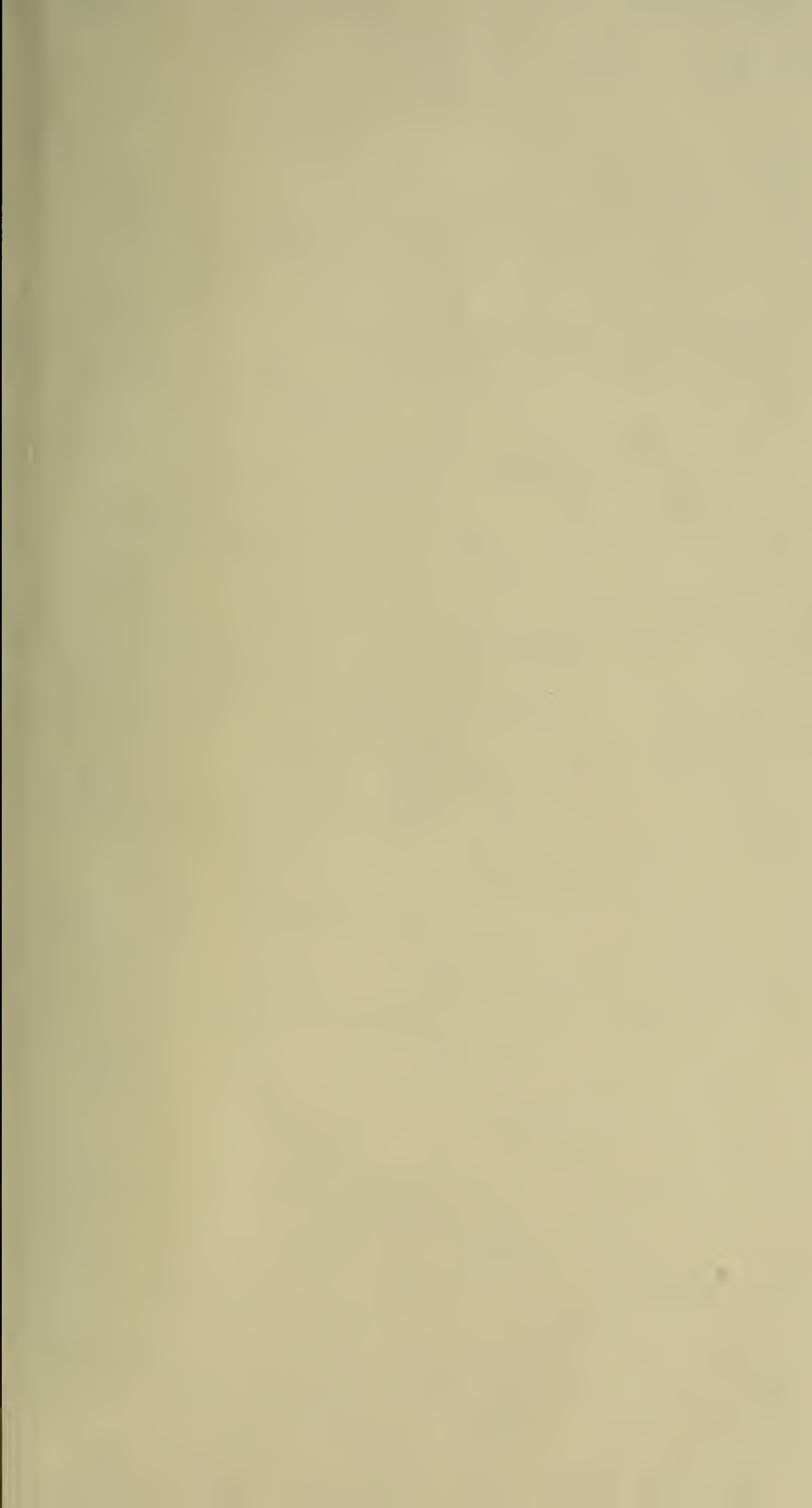
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